

## **AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application:

### **Listing of Claims:**

1           1-25 (Canceled)

1       26. (Currently amended) A method to facilitate simulating a digital circuit,  
2 comprising:

3           receiving a description of the digital circuit, wherein a first portion of the  
4 description is in a hardware description language and a second portion of the  
5 description is in a computer programming language,

6           blending the first portion and the second portion into an executable

7           simulation, wherein blending the first portion and the second portion involves  
8 automatically creating a wrapper for code written in the computer programming  
9 language so that code written in the hardware description language can call code  
10 written in the computer programming language; and

11           executing the executable simulation, wherein executing the executable  
12 simulation allows a designer to simulate operation of the digital circuit.

1       27. (Previously presented) The method of claim 26, wherein blending the  
2 first portion and the second portion involves mapping data types native to the  
3 hardware description language to data types native to the computer programming  
4 language.

1       28 (Canceled).

1        29. (Currently amended) The method of ~~claim 28~~claim 26, wherein the  
2        wrapper provides data communication mechanisms between code written in the  
3        hardware description language and code written in the computer programming  
4        language, wherein the data communication mechanisms provide mapping between  
5        types in the hardware description language and the computer programming  
6        language.

1        30. (Currently amended) The method of ~~claim 28~~claim 26, wherein the  
2        wrapper is automatically generated.

1        31. (Currently amended) The method of ~~claim 28~~claim 26, wherein the  
2        wrapper provides automatic threading.

1        32. (Currently amended) The method of ~~claim 31~~claim 26, wherein  
2        automatic threading enables code written in the computer programming language  
3        to call code written in the hardware description language.

1        33. (Currently amended) The method of ~~claim 28~~claim 26, wherein the  
2        wrapper can output a message upon an occurrence of a call and a return, wherein  
3        the message can include values associated with the call and the return.

1        34. (Currently amended) A computer-readable storage medium storing  
2        instructions that when executed by a computer cause the computer to perform a  
3        method to facilitate simulating a digital circuit, the method comprising:  
4            receiving a description of the digital circuit, wherein a first portion of the  
5        description is in a hardware description language and a second portion of the  
6        description is in a computer programming language,

7        blending the first portion and the second portion into an executable  
8    simulation, wherein blending the first portion and the second portion involves  
9    automatically creating a wrapper for code written in the computer programming  
10   language so that code written in the hardware description language can call code  
11   written in the computer programming language; and  
12        executing the executable simulation, wherein executing the executable  
13   simulation allows a designer to simulate operation of the digital circuit.

1        35. (Previously presented) The computer-readable storage medium of  
2   claim 34, wherein blending the first portion and the second portion involves  
3   mapping data types native to the hardware description language to data types  
4   native to the computer programming language.

1        36 (Canceled).

1        37. (Currently amended) The computer-readable storage medium of ~~claim~~  
2   ~~36~~claim 34, wherein the wrapper provides data communication mechanisms  
3   between code written in the hardware description language and code written in the  
4   computer programming language, wherein the data communication mechanisms  
5   provide mapping between types in the hardware description language and the  
6   computer programming language.

1        38. (Currently amended) The computer-readable storage medium of ~~claim~~  
2   ~~36~~claim 34, wherein the wrapper is automatically generated.

1        39. (Currently amended) The computer-readable storage medium of ~~claim~~  
2   ~~36~~claim 34, wherein the wrapper provides automatic threading.

1       40. (Currently amended) The computer-readable storage medium of claim  
2 ~~39~~claim 34, wherein automatic threading enables code written in the computer  
3 programming language to call code written in the hardware description language.

1       41. (Currently amended) The computer-readable storage medium of claim  
2 ~~36~~claim 34, wherein the wrapper can output a message upon an occurrence of a  
3 call and a return, wherein the message can include values associated with the call  
4 and the return.

1       42. (Currently amended) An apparatus to facilitate simulating a digital  
2 circuit, comprising:

3       a receiving mechanism configured to receive a description of the digital  
4 circuit, wherein a first portion of the description is in a hardware description  
5 language and a second portion of the description is in a computer programming  
6 language,

7       a blending mechanism configured to blend the first portion and the second  
8 portion into an executable simulation;

9       a creating mechanism configured to automatically create a wrapper for  
10 code written in the computer programming language so that code written in the  
11 hardware description language can call code written in the computer programming  
12 language; and

13       an executing mechanism configured to execute the executable simulation,  
14 wherein executing the executable simulation allows a designer to simulate  
15 operation of the digital circuit.

1       43. (Previously presented) The apparatus of claim 42, further comprising a  
2 mapping mechanism configured to map data types native to the hardware  
3 description language to data types native to the computer programming language.

1           44 (Canceled).

1       45. (Currently amended) The apparatus of ~~claim 44~~claim 42, further  
2       comprising a data communication mechanism configured to communicate  
3       between code written in the hardware description language and code written in the  
4       computer programming language, wherein the data communication mechanism  
5       provides mapping between types in the hardware description language and the  
6       computer programming language.

1       46. (Currently amended) The apparatus of ~~claim 44~~claim 42, wherein the  
2       wrapper is automatically generated.

1       47. (Currently amended) The apparatus of ~~claim 44~~claim 42, wherein the  
2       wrapper provides automatic threading.

1       48. (Currently amended) The apparatus of ~~claim 47~~claim 42, wherein  
2       automatic threading enables code written in the computer programming language  
3       to call code written in the hardware description language.

1       49. (Currently amended) The apparatus of ~~claim 44~~claim 42, wherein the  
2       wrapper can output a message upon an occurrence of a call and a return, wherein  
3       the message can include values associated with the call and the return.